

THAT WHICH IS CLAIMED:

1 1. A method for manufacturing a turbocharger assembly, the method
2 comprising:

3 providing a turbine housing defining a gas passage extending from
4 an inlet to an outlet and configured to receive a flow of exhaust gas
5 therethrough, the turbine housing configured to receive a rotatable turbine
6 therein such that the turbine is rotated by the flow of exhaust gas;

7 providing a center housing having a housing body defining
8 opposite first and second sides, a shaft bore extending between the first
9 and second sides, and a coolant passage configured to receive a coolant
10 fluid, wherein the center housing defines a mounting flange formed of one
11 piece with the housing body and extending generally radially outward
12 from the first side of the housing body, and the second side of the housing
13 body is configured to be connected to a compressor housing having a
14 compressor in rotatable communication with the turbine via a shaft
15 extending through the shaft bore of the housing body; and

16 connecting a connection portion of the mounting flange of the
17 center housing to the turbine housing such that a curved portion of the
18 mounting flange defines an annular space between the housing body and
19 the connection portion of the mounting flange.

1 2. A method according to Claim 1 further comprising forming the
2 curved portion of the mounting flange to define a generally c-shaped
3 cross-section.

1 3. A method according to Claim 1 further comprising forming the
2 curved portion of the mounting flange to extend circumferentially around
3 the housing body such that the curved portion defines an annular space
4 between the housing body and the connection portion of the flange.

- 1 4. A method according to Claim 1 further comprising forming the
2 coolant passage proximate to the mounting flange.
- 1 5. A method according to Claim 1 further comprising forming at least
2 one mounting hole in the connection portion of the mounting flange for
3 connecting the center housing to the turbine housing.
- 1 6. A method according to Claim 1 further comprising:
2 providing the housing body with the mounting flange extending
3 circumferentially around the shaft bore; and
4 forming a lubricant passage extending from an outer surface of the
5 housing body to the shaft bore.
- 1 7. A method according to Claim 1 further comprising:
2 providing a turbine;
3 connecting the turbine to a shaft; and
4 disposing the turbine in the turbine housing and the shaft through
5 the shaft bore of the housing body.
- 1 8. A method according to Claim 7 further comprising providing a
2 compressor wheel in a compressor housing, connecting the compressor
3 housing to the second side of the housing body of the center housing, and
4 connecting the compressor wheel to the shaft such that the compressor
5 wheel is in rotatable communication with the turbine via the shaft.

1 9. A method for manufacturing a turbocharger, the method
2 comprising:
3 providing a turbine housing defining a gas passage extending from
4 an inlet to an outlet and configured to receive a flow of exhaust gas
5 therethrough;
6 providing a rotatable turbine in the turbine housing, the rotatable
7 turbine configured to be rotated by the flow of exhaust gas;
8 providing a center housing having a housing body defining first
9 and second opposite sides, a shaft bore extending between the first and
10 second sides, a coolant passage configured to receive a coolant fluid, and a
11 mounting flange extending generally radially outward from the first side of
12 the housing body;
13 connecting a connection portion of the mounting flange to the
14 turbine housing such that a curved portion of the flange defines an annular
15 space between the housing body and the connection portion of the flange;
16 connecting a compressor housing to the second side of the housing
17 body;
18 providing a compressor wheel in the compressor housing; and
19 connecting the turbine and the compressor wheel with a shaft
20 extending through the shaft bore of the housing body.

1 10. A method according to Claim 9 wherein said step of providing the
2 center housing comprises providing the curved portion of the mounting
3 flange having a generally c-shaped cross-section.

1 11. A method according to Claim 9 wherein said step of providing the
2 center housing comprises providing the curved portion of the mounting
3 flange extending circumferentially around the housing body such that the
4 curved portion defines an annular space between the housing body and the
5 connection portion of the flange.

1 12. A method according to Claim 9 wherein said step of providing the
2 center housing comprises providing the coolant passage proximate to the
3 mounting flange.

1 13. A method according to Claim 9 wherein said step of providing the
2 center housing comprises providing at least one mounting hole in the
3 connection portion of the mounting flange for connecting the center
4 housing to the turbine housing.

1 14. A method according to Claim 9 further comprising forming a
2 lubricant passage in the housing body, the lubricant passage extending
3 from an outer surface of the housing body to the shaft bore.